



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/538,054 | 01/13/2006 | John Arthur Taylor | 050290 001P2 | 8507 |

33805 7590 04/01/2009
WEGMAN, HESSLER & VANDERBURG
6055 ROCKSIDE WOODS BOULEVARD
SUITE 200
CLEVELAND, OH 44131

| |
|----------|
| EXAMINER |
|----------|

PIERY, MICHAEL T

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1791

| | |
|-----------|---------------|
| MAIL DATE | DELIVERY MODE |
|-----------|---------------|

04/01/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/538,054 | Applicant(s) TAYLOR ET AL. | |
| | Examiner MICHAEL T. PIERY | Art Unit 1791 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,5,10,16,18-21,24,25,27,29,34,35,38,42 and 43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,10,16,18-21,24,25,27,29,34,35,38,42 and 43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1791

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1, 4, 5, 10, 16, 18, 19, 24, 25, 27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aktien (GB 717,103) in view of Dunmire et al. (US 4,519,098).

Aktien teaches a method of making a garment comprising applying a coagulant to a substrate, applying a polymeric material to the substrate, coagulating some of the coagulant for a

Art Unit: 1791

controlled period of time (Page 1, lines 60-68), and removing the uncoagulated portion of the coagulant (Page 3, lines 70-75). Aktien does not explicitly teach the polymeric material is foamed. However, Dunmire teaches it is well-known to use foam material in the formation of polymeric garments (column 3, lines 55-69). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the process of Aktien to include the foam material of Dunmire because the foam provides bulk (column 3, lines 55-69), breathability and moisture absorbency (column 2, lines 15-19), desired characteristics of Aktien (page 2, column 1, lines 26-29). Aktien does not explicitly teach the claimed water absorbency. However, since the modified Aktien reference teaches the claimed process steps, the examiner interprets the product possesses the claimed moisture absorbency. Alternatively, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the controlled time to achieve the desired moisture absorbency since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum workable ranges is within routine skill in the art (MPEP 2144.05 II-A).

Regarding claims 4 and 10, Aktien teaches using air to remove the uncoagulated foam from the substrate (Page 3, Column 2, lines 70-75).

Regarding claim 5, Aktien does not explicitly teach the fluid is a liquid. However, Aktien teaches using fluid (air) to remove uncoagulated foam from the substrate (Page 3, Column 2, lines 70-75) and would have been obvious to one of ordinary skill in the art at the time of the invention to use liquid since air and liquid are both equivalent fluids used in removal processes and substitution of know equivalents is within routine skill of one in the art (MPEP 2144.06).

Art Unit: 1791

Regarding claim 16, Aktien does not explicitly teach removing the coagulant using liquid immersion, however, liquid immersion is a well-known removal technique, and it would have been obvious to one of ordinary skill in the art at the time of the invention to use liquid immersion to remove the uncoagulated foam since substitution of known equivalent methods is within routine skill of one in the art (MPEP 2144.06).

Regarding claim 18, Aktien teaches it is known to use knitted polyamide fiber (nylon) as the substrate (Page 2, line 125).

Regarding claim 19, the examiner submits nylon/lycra blends are well-known substrates used in garment manufacture and it would have been obvious to use the nylon/lycra blend rather than nylon based on the desired final properties of the garment.

Regarding claim 24, Aktien teaches the coagulant is an aqueous solution of calcium nitrate (Page 2, lines 125-129).

Regarding claim 25, Aktien teaches the coagulant is an alcoholic solution of calcium chloride (Page 3, lines 42-47).

Regarding claim 27, Aktien teaches using rubber latex as the polymer material (Page 3, line 4).

Regarding claim 29, Aktien teaches placing the substrate on a mold (frame) before coagulant is applied (Page 2, lines 125-129).

3. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aktien (GB 717,103) in view of Dunmire et al. (US 4,519,098) as applied above to claim 1, further in view of Seibert et al. (US 3,846,156).

Art Unit: 1791

The modified Aktien reference teaches the method of claim 1, as applied above.

Regarding claims 20 and 21, Aktien does not explicitly teach removing the coagulant via water immersion or drying the substrate after water immersion. However, Seibert teaches it is known to immerse a substrate into a water bath to remove the coagulant (Column 8, lines 10-12) and then dry the substrate (Column 8, lines 14-15). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the process of Aktien to include the steps of Seibert because coagulants are known skin irritants and it is desirable to remove skin irritants from wearable garments.

4. Claims 34, 35, 38, 42, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aktien (GB 717,103) in view of Dunmire et al. (US 4,519,098) as applied above to claim 1, further in view of Halley et al. (US 2002/0197924).

The modified Aktien reference teaches the method of claim 1, as applied above.

Regarding claim 34, Aktien does not explicitly teach applying an array of discrete areas to the layer of coagulated material. However, Halley teaches it is known to coat garments with a polymeric material in a discrete array (Paragraph 0019). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the process of Aktien to include a polymeric array because coating provides wear resistance (Paragraph 0019), a desired property of garments.

Regarding claim 35, Aktien does not explicitly teach providing dressing the garment on an array former. However, Halley teaches providing an array former, dressing the garment on the array former then applying the coating (Paragraph 0037) then curing the coating and

Art Unit: 1791

stripping the garment material from the former (Paragraph 0038). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the process of Aktien to include a polymeric array because coating provides wear resistance (Paragraph 0019), a desired property of garments.

Regarding claim 38, Aktien does not explicitly teach the coating is polyurethane latex. Halley teaches using polyurethane, but not explicitly polyurethane latex. However, it would have been obvious to one of ordinary skill in the art at the time of the invention use a polyurethane latex since both polyurethane and polyurethane latex exhibit desirable properties such as wear resistance and hydrophobicity.

Regarding claim 42, Aktien does not explicitly teach the array comprises an array of dots. However, Halley teaches the array comprises dots (Paragraph 0019).). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the process of Aktien to include a polymeric array because coating provides wear resistance (Paragraph 0019), a desired property of garments.

Regarding claim 43, does not explicitly teach the array comprises an array of dots and strengthening patches. However, Halley teaches an array of dots (Paragraph 0019), and the examiner interprets that the dots inherently provide increased strength to the garments. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the process of Aktien to include a polymeric array because coating provides wear resistance (Paragraph 0019), a desired property of garments.

Response to Arguments

Art Unit: 1791

Applicant's arguments filed December 10, 2008 have been fully considered but they are not persuasive.

Applicant argues that if a foamed polymeric material were used in the process of GB '103, it would not form lamellae between the fibers of the mesh that can be removed. The examiner disagrees. Dunmire states the foam can has as low as 5% air content. The examiner interprets that when this foam is partially coagulated, as described in Aktien, the mixture becomes viscous and stable enough to form lamellae. There is no evidence that using a foam in the process of Aktien would not form lamellae, and that arguments cannot take the place of evidence (MPEP 2145). Further, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the foam mixture composition, degree of coagulation and mesh spacing in order to achieve the desired lamellae. It is noted that the secondary reference has been changed and applicant's argument was addressed to the original combination.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

Art Unit: 1791

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL T. PIERY whose telephone number is (571)270-5047. The examiner can normally be reached on M-Th 8:30-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael T Piery/
Examiner, Art Unit 1791

/Monica A Huson/
Primary Examiner, Art Unit 1791